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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,676	07/13/2001	Nicholas Jon Ede	660097.408	4816

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EXAMINER

TRAN, MY CHAU T

ART UNIT	PAPER NUMBER
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1639

DATE MAILED: 08/15/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/905,676

Applicant(s)

EDE ET AL.

Examiner

My-Chau T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 2-5,7-10,13-17,19,20,22,23 and 30-33 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24 is/are allowed.
- 6) ☒ Claim(s) 1,6,11,12,18,21 and 25-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's amendment filed 6/24/03 in Paper No. 11 is acknowledged and entered.

Claims 1 and 24 are amended by the amendment.

2. Claims 1-33 are pending.

Election/Restrictions

3. Claims 30-33 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to *nonelected inventions*, there being no allowable generic or linking claim.

Election was made **without** traverse in Paper No. 8.

4. This application contains claims 30-33 are drawn to an invention nonelected **without** traverse in Paper No. 8. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

5. Claims 2-5, 7-10, 13-17, 19-20, and 22-23 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to *nonelected species*, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 8.

6. Claims 1, 6, 11-12, 18, 21, and 25-29 are treated on the merit in this Office Action.

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Withdrawn Rejections

7. The previous rejections under 35 USC 103(a) as being obvious over M^c Pherson et al. (US Patent 6,013,855) in view of Goldberg et al. (US Patent 5,804,263) for claims 1, 6, 11-12, and 18 have been withdrawn in view of applicant's argument that there is no reason to combine the references of M^c Pherson et al. and Goldberg et al.

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Maintained Rejections

Claim Rejections - 35 USC § 102

9. Claims 1, 6, 11-12, and 18 (*Note: included claim 18, which was inadvertently left out in the injection of the last Office Action*) are rejected under 35 U.S.C. 102(b) as being anticipated by Goldberg et al. (US Patent 5,804,263).

Goldberg et al. disclosed a grafted polymeric surface (col. 5, lines 50-54). The process of gamma beam radiation induced polymerization surface modification is used to produce the grafted polymeric surface (col. 5, lines 7-10). The surface includes metallic surfaces such as nickel (col. 10, lines 3-6). The grafted polymeric surface of Goldberg et al. anticipates the presently claimed invention.

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Response to Arguments

10. Applicant's argument(s) directed to the above rejection under 35 USC 102(b) as being anticipated by Goldberg et al. (US Patent 5,804,263) for claims 1, 6, 11-12, and 18 were considered but they are not persuasive for the following reasons.

Applicant alleges that “[G]oldberg fails to disclose any device, especially a modular device, for supporting an active species.”

Applicant's arguments are not convincing since Goldberg et al. anticipated the presently claimed invention. Goldberg et al. disclose that “[A]ny instrument, device, implant, etc., constructed of one or more plastic, ceramic or metallic material component may be surface modified according to the present invention to improve the tissue contacting characteristics of the surfaces thereof” (col. 8, lines 39-43) (e.g. an activated modular grafted polymeric surface adapted to support an active species for a reaction). Thus Goldberg et al. anticipated the presently claimed invention.

Further, the newly added limitation of “*adapted to support an active species for a reaction*” bares no patentable weight to an “apparatus” claim for it is a functional limitation. See MPEP § 2114:

“>While features of an apparatus may be recited either structurally or functionally, claims< directed to >an< apparatus must be distinguished from the prior art in terms of structure rather than function. >In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also *In re Swinehart*, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971); < *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). “[A]pparatus claims cover what a device is, not what a device does.” *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).”

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Therefore Goldberg et al. anticipated the presently claimed invention because disclose *all* of the presently claimed structural features (e.g. the activated modular grafted polymeric surface comprises a polyacrylic acid graft and a nickel metal chelating agent).

Claim Rejections - 35 USC § 103

11. Claims 1, and 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over M^c Pherson et al. (US Patent 6,013,855) in view of Lukhtanov et al. (US Patent 6,339,147).

M^c Pherson et al. disclosed a grafted polymeric surface (col. 4, lines 9-44). The process of gamma beam radiation induced polymerization surface modification is used to produce the grafted polymeric surface (col. 4, lines 24-27). The surface includes metals and glasses (col. 5, lines 51-55). The grafted polymer includes polyacrylic acid (col. 6, lines 52-56). The grafted polymer surface is biocompatible in which enzymes can be immobilized (col. 4, lines 22-23).

The grafted polymeric surface of M^c Pherson et al. does not expressly disclose that the grafted polymeric surface bind to an amine compound by Schiff base formation.

Lukhtanov et al. disclosed the Schiff base type covalent linkage that covalently link oligonucleotide to a solid support (col. 3, lines 38-41). The advantage of the Schiff base type covalent linkage is its stability and high coupling densities on the surface of the solid support (col. 4, lines 21-37).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the binding of the grafted polymeric surface to an amine compound by Schiff base formation as taught by Lukhtanov et al. in the grafted polymeric surface of M^c Pherson et al. One of ordinary skill in the art would have been motivated to

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include the binding of the grafted polymeric surface to an amine compound by Schiff base formation in the grafted polymeric surface of M^c Pherson et al. for the advantage of providing a stable linkage and high coupling densities on the surface of the solid support. Since both M^c Pherson et al. and Lukhtanov et al. disclose immobilizing a biomolecule onto a solid support (M^c Pherson: col. 4, lines 22-23; Lukhtanov: col. 3, lines 38-41).

Response to Arguments

12. Applicant's argument(s) directed to the above rejection under 35 USC 103(a) as being unpatentable over M^c Pherson et al. (US Patent 6,013,855) in view of Lukhtanov et al. (US Patent 6,339,147) for claims 1, and 25-29 were considered but they are not persuasive for the following reasons.

Applicant contends that “[M]cPherson also fails to teach or suggest providing a modular support surface.” Therefore the combination of M^c Pherson et al. and Lukhtanov et al. do not teach the presently claimed invention.

Applicant's arguments are not convincing since M^c Pherson et al. do teach a modular support surface. M^c Pherson et al. disclose the “[M]ethods for grafting unmodified PEO or any other water-soluble polymers to the surfaces of metals and glasses to form biocompatible surfaces having low protein affinity” (Abstract; col. 1, lines 14-16) (e.g. the resulting product is a modular support surface adapted to support an active species for a reaction). Thus M^c Pherson et al. do teach a modular support surface. Therefore, the combination of M^c Pherson et al. and Lukhtanov et al. do teach the presently claimed invention.

New Rejections - Necessitated by Amendment

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

14. Claims 1 and 6 rejected under 35 U.S.C. 102(e) as being anticipated by M^c Pherson et al. (US Patent 6,013,855).

M^c Pherson et al. disclosed a grafted polymeric surface (Abstract; col. 4, lines 9-44). The process of gamma beam radiation induced polymerization surface modification is used to produce the grafted polymeric surface (col. 4, lines 24-27). The surface includes metals and glasses (col. 5, lines 51-55). The grafted polymer includes polyacrylic acid (col. 6, lines 52-56). The grafted polymer surface is biocompatible in which enzymes can be immobilized (col. 4, lines 22-23).

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Allowable Subject Matter

15. Claim 24 is allowed.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to My-Chau T. Tran whose telephone number is 703-305-6999. The examiner is on Increased Flex Schedule and can normally be reached on Monday: 8:00-2:30; Tuesday-Thursday: 7:30-5:00; Friday: 8:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew J. Wang can be reached on 703-306-3217. The fax phone numbers for the

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organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1123.

mct

August 13, 2003


PADMASHRI PONNALURI
PRIMARY EXAMINER